## Amendments to the Claims:

## 1. (Currently Amended) A compound of formula (I)

(1)

or a salt, <u>or</u> solvate <u>thereof</u>, <del>or physiologically functional derivative thereof,</del> wherein:

n is an integer of from 2 to 8;

m is an integer of from 3 to 11, with the proviso that the sum of n + m is from 5 to 19;

R<sup>1</sup> is hydrogen or -XSO₂NR<sup>6</sup>R<sup>7</sup>;

wherein X is  $-(CH_2)_p$  - or  $C_{2-6}$  alkenylene;

p is an integer from 0 to 6;

R<sup>6</sup> and R<sup>7</sup> are independently selected from hydrogen, C<sub>1-6</sub>alkyl, C<sub>3-7</sub>cycloalkyl, CONR<sup>8</sup>R<sup>9</sup>, phenyl and phenyl(C<sub>1-4</sub>alkyl)-,

or R<sup>6</sup> and R<sup>7</sup>, together with the nitrogen atom to which they are bonded, form a 5-, 6- or 7- membered nitrogen – containing ring;

and  $R^6$  and  $R^7$  are each independently optionally substituted by 1 or 2 groups independently selected from halo,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, hydroxy-substituted  $C_{1-6}$ alkoxy,

C<sub>1-6</sub>haloalkyl, CO<sub>2</sub>R<sup>8</sup>, SO<sub>2</sub>R<sup>8</sup>R<sup>9</sup>, -CONR<sup>8</sup>R<sup>9</sup>, -NR<sup>8</sup>C(O)R<sup>9</sup> or a 5-, 6- or 7-membered heterocyclic ring;

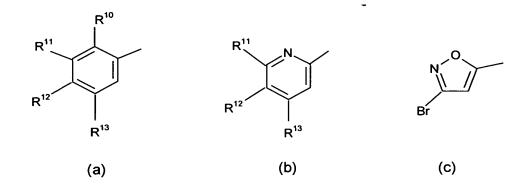
 $R^8$  and  $R^9$  are independently selected from hydrogen,  $C_{1-6}$ alkyl,  $C_{3-7}$ cycloalkyl, phenyl and phenyl( $C_{1-6}$ alkyl)-;

 $R^2$  and  $R^3$  are independently selected from hydrogen,  $C_{1-6}$ alkyl,  $C_{1-6}$ alkoxy, halo, phenyl and  $C_{1-6}$ haloalkyl;

R<sup>4</sup> and R<sup>5</sup> are independently selected from hydrogen and C<sub>1-4</sub> alkyl with the proviso that the total number of carbon atoms in R<sup>4</sup> and R<sup>5</sup> is not more than 4,

and

Ar is a group selected from the group consisting of:



wherein R<sup>11</sup> represents hydrogen, halogen, -(CH<sub>2</sub>)<sub>q</sub>OR<sup>14</sup>, -NR<sup>14</sup>C(O)R<sup>15</sup>, -NR<sup>14</sup>SO<sub>2</sub>R<sup>15</sup>, -NR<sup>14</sup>R<sup>15</sup>, -NR<sup>14</sup>R<sup>15</sup>, -OC(O)R<sup>16</sup> or OC(O)NR<sup>14</sup>R<sup>15</sup>,

and  $R^{10}$  represents hydrogen, halogen or  $C_{1-4}$  alkyl;

or R<sup>11</sup> represents –NHR<sup>17</sup> and R<sup>10</sup> and –NHR<sup>17</sup> together form a 5- or 6-membered heterocyclic ring;

 $R^{12}$  represents hydrogen, halogen,  $-OR^{14}$  or  $-NR^{14}R^{15}$ ;  $-OC(O)R^{16}$  or  $-OC(O)NR^{14}R^{15}$ ;

 $R^{13}$  represents hydrogen, halogen, halo $C_{1\text{--}4}$  alkyl, -OR<sup>14</sup> or -NR<sup>14</sup> R<sup>15</sup>;

 $\mathsf{R}^{14}$  and  $\mathsf{R}^{15}$  each independently represents hydrogen or  $\mathsf{C}_{1\text{-}4}$  alkyl, or in the groups

-NR<sup>14</sup>R<sup>15</sup>, -SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup> and –OC(O)NR<sup>14</sup>R<sup>15</sup>, R<sup>14</sup> and R<sup>15</sup> independently represent hydrogen or C<sub>1-4</sub> alkyl or together with the nitrogen atom to which they are attached form a 5-, 6- or 7- membered nitrogen-containing ring,

 $\mathsf{R}^{16}$  represents an aryl (eg phenyl or naphthyl) group which may be unsubstituted or substituted by one or more substituents selected from halogen,  $\mathsf{C}_{1.4}$  alkyl,

hydroxy, C<sub>1-4</sub> alkoxy or halo C<sub>1-4</sub> alkyl; and

q is zero or an integer from 1 to 4;

provided that when  $R^1$  is hydrogen Ar is not a group (a) wherein;  $R^{11}$  is  $-(CH_2)_qOR^{14}$ , q is zero or 1 and  $R^{12}$  is  $OR^{14}$ , or  $R^{11}$  is  $-(CH_2)_qOR^{14}$ , q is zero and  $R^{13}$  is  $OR^{14}$ , or  $R^{11}$  is  $-NR^{14}SO_2$   $R^{15}$  or  $NR^{14}COR^{15}$  and  $R^{12}$  is  $OR^{14}$ , or  $R^{11}$  and  $R^{13}$  both represent halogen and  $R^{12}$  is  $NR^{14}R^{15}$ ; Ar is not a group (b) wherein  $R^{11}$  is  $-(CH_2)_qOR^{14}$  and  $R^{12}$  is  $OR^{14}$ ; Ar is not a group (c), and when  $R^1$  is  $XSO_2NR^6R^7$ , Ar is not a group (a) wherein  $R^{11}$  is  $(CH_2)_qOR^{14}$  or  $NR^{14}COR^{15}$ , and  $R^{12}$  is  $OR^{14}$ .

2. (Currently Amended) A compound of formula (I) according to claim 1 wherein, in the group Ar,  $R^{11}$  represents halogen, -(CH<sub>2</sub>)<sub>q</sub>OR<sup>14</sup>, -NR<sup>14</sup>C(O)R<sup>15</sup>, -NR<sup>14</sup>SO<sub>2</sub>R<sup>15</sup>, -SO<sub>2</sub>NR<sup>14</sup>R<sup>15</sup>, -NR<sup>14</sup>R<sup>15</sup>, -OC(O)R<sup>16</sup> or OC(O)NR<sup>14</sup>R<sup>15</sup>,

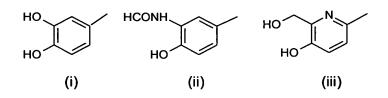
and R<sup>10</sup> represents hydrogen,

or R<sup>11</sup> represents –NHR<sup>17</sup> and R<sup>10</sup> and –NHR<sup>17</sup> together form a 5- or 6-membered heterocyclic ring;

and

R<sup>13</sup> represents hydrogen, halogen, halo, C<sub>1-4</sub> alkyl, -OR<sup>14</sup>, or -NR<sup>14</sup>R<sup>15</sup>; and all other substituents are as defined n claim 1.

- 3. (Currently Amended) A compound of formula (I) according to claim 1 or claim 2 wherein the group  $R^1$  is attached to the meta-position relative to the  $-O-(CH_2)_m$  link.
- 4. (Currently Amended) A compound of formula (I) according to claim 1 any of claims 1 to 3 wherein  $R^1$  represents  $SO_2NR^6R^7$  wherein  $R^6$  and  $R^7$  are independently selected from hydrogen and  $C_{1-6}$ alkyl.
- 5. (Currently Amended) A compound of formula (I) according to claim 1 any of claims 1 to 4 wherein R<sup>4</sup> and R<sup>5</sup> are independently selected from hydrogen and methyl.
- 6. (Currently Amended) A compound of formula (I) according to claim 1 any of claims 1 to 5 wherein R<sup>2</sup> and R<sup>3</sup> each represent hydrogen.
- 7. (Currently Amended) A compound of formula (I) according to claim 1 any of claims 1 to 6 wherein n is 5 or 6 and m is 3 or 4 such that m + n is 8, 9 or 10.
- 8. (Currently Amended) A compound of formula (I) according to claim 1 any of claims 1 to 7 wherein Ar represents a group selected from the group consisting of:



$$H_3CSO_2NH$$
 $H_2NSO_2$ 
 $H_2NSO_2$ 
 $H_2NSO_2$ 
 $H_3CSO_2NH$ 
 $H_2NSO_2$ 
 $H_3CSO_2NH$ 
 $H_3CSO_2NH$ 
 $H_2NSO_2$ 
 $H_3NSO_2$ 
 $H$ 

$$(p-CH_3)C_6H_4CO$$

$$(CH_3)_2NCO$$

$$OCC_6H_4(p-CH_3)$$

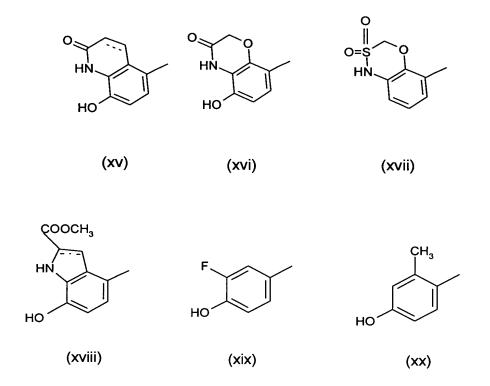
$$OCN(CH_3)_2$$

$$(xii)$$

$$(xiii)$$

$$(xiii)$$

$$(xiv)$$



- 9. (Currently Amended) A compound of formula (I) according to <u>claim 8</u> any of claims 1 to 8 wherein R<sup>1</sup> is hydrogen and Ar is selected from a <u>the group consisting</u> of structure (ii), (v), (vii), (viii), (ix), (xi), (xii), (xiii), (xiv), (xv), (xvi), (xvii) and (xviii).
- 10. (Currently Amended) A compound of formula (I) according to claim 8 any of claims 1 to 8 wherein R<sup>1</sup> is XSO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> and Ar is selected from a the group consisting of structure (iii), (iv), (xiv), (xvi), and (xix).
- 11. (Currently Amended) A compound of formula (I) selected from the group consisting of:

8-Hydroxy-5-((1R)-1-hydroxy-2- $\{[6-(4-phenylbutoxy)hexyl]amino\}ethyl)quinolin-2(1<math>H$ )-one;

3-{4-[(6-{[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-

yl)ethyl]amino}hexyl)oxy]butyl}benzenesulfonamide;
5-Hydroxy-8-(1-hydroxy-2-{[6-(4-phenylbutoxy)hexyl]amino}e

5-Hydroxy-8-(1-hydroxy-2-{[6-(4-phenylbutoxy)hexyl]amino}ethyl)-2*H*-1,4-benzoxazin-3(4*H*)-one;

3-{4-[(6-{[2-hydroxy-2-(5-hydroxy-3-oxo-3,4-dihydro-2*H*-1,4-benzoxazin-8-yl)ethyl]amino}hexyl)oxy]butyl}benzenesulfonamide;

4-Hydroxy-7-((1R)-1-hydroxy-2-{[6-(4-phenylbutoxy)hexyl]amino}ethyl)-1,3-benzothiazol-2(3H)-one;

4-Hydroxy-7-(1-hydroxy-2-{[6-(4-phenylbutoxy)hexyl]amino}ethyl)-1,3-benzothiazol-2(3*H*)-one;

3-{4-[(6-{[(2R)-2-(3-Fluoro-4-hydroxyphenyl)-2-

hydroxyethyl]amino}hexyl)oxy]butyl}benzenesulfonamide;

3-(4-{[6-({2-Hydroxy-2-[5-hydroxy-6-(hydroxymethyl)pyridin-2-

yl]ethyl}amino)hexyl]oxy}butyl)benzenesulfonamide;

 $3-[4-({6-[((2R)-2-Hydroxy-2-{4-hydroxy-3-}}$ 

[(methylsulfonyl)amino]phenyl}ethyl)amino]hexyl}oxy)butyl]benzenesulfonami de;

3-{3-[(7-{[(2R)-2-(3-Fluoro-4-hydroxyphenyl)-2-

hydroxyethyl]amino}heptyl)oxy]propyl}benzenesulfonamide;

3-(3-{[7-({2-Hydroxy-2-[5-hydroxy-6-(hydroxymethyl)pyridin-2-

yl]ethyl}amino)heptyl]oxy}propyl)benzenesulfonamide;

 $3-[3-({7-[((2R)-2-Hydroxy-2-{4-hydroxy-3-}}$ 

[(methylsulfonyl)amino]phenyl}ethyl)amino]heptyl}oxy)propyl]benzenesulfona mide;

 $3-{3-[(7-{[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-4-(3-[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-4-(3-[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-4-(3-[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-4-(3-[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-4-(3-[(2R)-2-Hydroxy-2-(8-hydroxy-2-oxo-1,2-dihydroquinolin-5-4-(3-[(2R)-2-(2$ 

yl)ethyl]amino}heptyl)oxy]propyl}benzenesulfonamide;

3-(3-{[7-({(2R)-2-[3-(Formylamino)-4-hydroxyphenyl]-2-

hydroxyethyl}amino)heptyl]oxy}propyl)benzenesulfonamide;

<u>a</u> salt <u>thereof</u>, <u>and a solvate <u>thereof</u>, <del>or physiologically functional derivative thereof</del>.</u>

- 12. (Currently Amended) A method for the prophylaxis or treatment of a clinical condition in a mammal, such as a human, for which a selective β<sub>2</sub>-adrenoreceptor agonist is indicated, which comprises <u>administering</u> administration of a therapeutically effective amount of a compound of formula (I) according to <u>claim 1</u> any of claims 1 to 11, or a pharmaceutically acceptable salt, <u>or</u> solvate <u>thereof</u>, <u>or physiologically functional derivative</u> thereof.
  - 13. (Canceled)
- 14. (Currently Amended) A pharmaceutical formulation comprising a compound of formula (I), according to <u>claim 1</u> any of claims 1 to 11, or a pharmaceutically acceptable salt, <u>or</u> solvate <u>thereof</u>, <del>or physiologically functional derivative thereof,</del> and a pharmaceutically acceptable carrier or excipient, and optionally one or more other therapeutic ingredients.
  - 15. (Canceled)
- 16. (Currently Amended) A process for the preparation of a compound of formula (I), according to <u>claim 1</u> any of claims 1 to 11, or a salt, <u>or</u> solvate <u>thereof</u>, <u>or physiologically functional derivative thereof</u>, which comprises:
- (a) <u>deprotecting deprotection of a protected intermediate of formula (II):</u>

$$R^{25}$$
CHCH<sub>2</sub>NCR<sup>4</sup>R<sup>5</sup>(CH<sub>2</sub>)<sub>n</sub>O(CH<sub>2</sub>)<sub>m</sub>  $R^{3}$  (II)

or a salt or solvate thereof, wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, m and n are as defined for the compounds of formula (I) R<sup>25</sup> represents an optionally protected form of Ar, and R<sup>26</sup> and R<sup>27</sup> each independently represent either hydrogen or a protecting group, provided that the compound of formula (II) contains at least en one protecting group;

(b) reacting a compound of formula (XIII):

Wherein Ar is as defined above with a compound of formula (VI):

LCR
$$^4$$
R $^5$ (CH $_2$ ) $_n$ O(CH $_2$ ) $_m$   $R^3$  (VI)

Wherein L is a leaving group such as halo (typically chloro, bromo or iodo) or a sulphonate (typically methanosulphonate) and R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, n and m are as defined for compounds of formula (I).

## (c) reacting a compound of formula (XV):

wherein L is a leaving group as hereinbefore defined, with an amine of formula (XVI):

$$\frac{\mathsf{H_2NCR^4R^5(CH_2)_nO(CH_2)_m}}{\mathsf{R^3}}$$

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, n and m are as defined for formula (I); and

## (d) (i) reacting a compound of formula (XIII):

Wherein Ar is as hereinbefore defined and R<sup>34</sup> is a chiral auxiliary group, with a compound of formula (XVII):

$$\begin{array}{c}
O \\
\downarrow \\
R^4-C-(CH_2)_nO(CH_2)_m
\end{array}$$

$$\begin{array}{c}
R^2 \\
R^3$$
(XVII)

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, n and m are as hereinbefore defined; followed where necessary by removal of said chiral auxiliary group R<sup>34</sup>;

er (ii) reacting a compound of formula (XVIII):

wherein Ar is as hereinbefore defined; with an amine of formula (XVI):

$$H_2NCR^4R^5(CH_2)_nO(CH_2)_m$$
  $R^3$  (XVI)

as hereinbefore defined,

under conditions suitable to effect reductive amination,

wherein said process may further optionally comprise one or more of followed by the following steps in any order:

- (i) optional removal of removing any protecting groups;
- (ii) optional separation of separating an enantiomer from a mixture of enantiomers:
- (iii) eptional conversion of converting the product to a corresponding salt, solvate, or
- (iv) optional conversion of <u>converting</u> a group R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> to another group R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup>, or physiologically functional derivative thereof.
- 17. (New) A compound of the formula (I) according to claim 1, wherein m is an integer ranging from 3 to 7.
- 18. (New) A compound of the formula (I) according to claim 1, wherein the sum of n + m ranges from 5 to 12.
- 19. (New) A compound of the formula (I) according to claim 1, wherein p is an integer ranging from 0 to 4.

- 20. (New) A method according to claim 12, wherein the mammal is a human.
- 21. (New) A method according to claim 12, wherein the clinical condition is asthma.
- 22. (New) A method according to claim 12, wherein the clinical condition is COPD.
- 23. (New) A process for the preparation of a compound of formula (I), according to claim 1 or a salt, or solvate thereof, which comprises:

reacting a compound of formula (XIII):

Wherein Ar is as defined above with a compound of formula (VI):

(VI)

wherein L is a leaving group and R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, n and m are as defined for compounds of formula (I);

wherein said process may further optionally comprise one or more of following steps in any order:

- (i) removing any protecting groups;
- (ii) separating an enantiomer from a mixture of enantiomers;
- (iii) converting the product to a corresponding salt, solvate, or
- (iv) converting a group R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup> to another group R<sup>1</sup>, R<sup>2</sup> and/or R<sup>3</sup>.
- 24. (New) A process according to claim 23, wherein the leaving group comprises a halo group.
- 25. (New) A process according to claim 24, wherein the halo group is selected from the group consisting of chloro, bromo, and iodo.
- 26. (New) A process according to claim 23, wherein the leaving group comprises a sulphonate group.
- 27. (New) A process according to claim 26, wherein the sulphonate group is a methanesulphonate group.

28. (New) A process for the preparation of a compound of formula (I), according to claim 1, or a salt or solvate thereof, which comprises:

reacting a compound of formula (XV):

wherein L is a leaving group, with an amine of formula (XVI):

$$H_2NCR^4R^5(CH_2)_nO(CH_2)_m$$
 $R^2$ 
 $R^1$ 
 $R^3$ 
(XVI)

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, n and m are as defined for formula (I); and wherein said process may further optionally comprise one or more of the following steps in any order:

- (i) removing any protecting groups;
- (ii) separating an enantiomer from a mixture of enantiomers;
- (iii) converting the product to a corresponding salt, solvate, or
- (iv) converting a group  $R^1$ ,  $R^2$  and/or  $R^3$  to another group  $R^1$ ,  $R^2$  and/or  $R^3$ .
- 29. (New) A process according to claim 28, wherein the leaving group comprises a halo group.

- 30. (New) A process according to claim 28, wherein the halo group is selected from the group consisting of chloro, bromo, and iodo.
- 31. (New) A process according to claim 28, wherein the leaving group comprises a sulphonate group.
- 32. (New) A process according to claim 28, wherein the sulphonate group is a methanesulphonate group.
- 33. (New) A process for the preparation of a compound of formula (I), according to claim 1 or a salt or solvate thereof, wherein said process is selected from the group consisting of (i) and (ii):
  - (i) reacting a compound of formula (XIII):

Wherein Ar is as hereinbefore defined and  $R^{34}$  is a chiral auxiliary group, with a compound of formula (XVII):

$$\begin{array}{c}
O \\
R^4-C-(CH_2)_nO(CH_2)_m
\end{array}$$

$$\begin{array}{c}
R^2 \\
R^3$$
(XVII)

wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, n and m are as hereinbefore defined; optionally followed by removing said chiral auxiliary group R<sup>34</sup>;

and (ii) reacting a compound of formula (XVIII):

wherein Ar is as hereinbefore defined; with an amine of formula (XVI):

$$H_2NCR^4R^5(CH_2)_nO(CH_2)_m$$
 $R^2$ 
 $R^1$ 
 $R^3$ 
(XVI)

as hereinbefore defined,

under conditions suitable to effect reductive amination,

wherein said process may further optionally comprise one or more of the following steps in any order:

- (i) removing any protecting groups;
- (ii) separating an enantiomer from a mixture of enantiomers;
- (iii) converting the product to a corresponding salt, solvate,
- (iv) converting a group  $R^1$ ,  $R^2$  and/or  $R^3$  to another group  $R^1$ ,  $R^2$  and/or  $R^3$ .